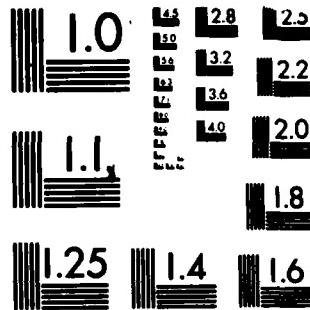


AD-A140 893 19321 AT MLRS MISSILE NUMBER 6721 6722 6719 6715 6716
AND 6718 ROUND NUMB..(U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM.. D C KELLER 07 MAR 84
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METEOROLOGICAL DATA REPORT

19321 AT MLRS

Missile Number 6721, 6722, 6719, 6715, 6716, and 6718
ROUND NUMBER V-575/FB-18 thru V-580/FB-23

7 March 1984

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568



ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

.....
ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

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INTRODUCTION

19321 AT MLRS, Missile Numbers 6721, 6722, 6719, 6715, 6716, and 6718, Round Numbers V-575/FB-18 thru V-580/FB-23, were launched from Tula Gate, White Sands Missile Range (WSMR) New Mexico, at 1036:18, 1036:22, 1037:27, 1036:31, 1036:36, and 1036:40 MST 7 Mar 84. The shceduled launch times were 1000 MST with a 4.5 second separation.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmsopheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the Tula Gate Met Sites at T-0 mintues.

(2) Anemometer data were provided from existing tower-mounted anemometer at Tula Gate. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low Level wind data were obtained from pilot-balloon observations at:

SITE AND ALTITUDE

Tula Gate	1350 Meters
Mal	2000 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites:

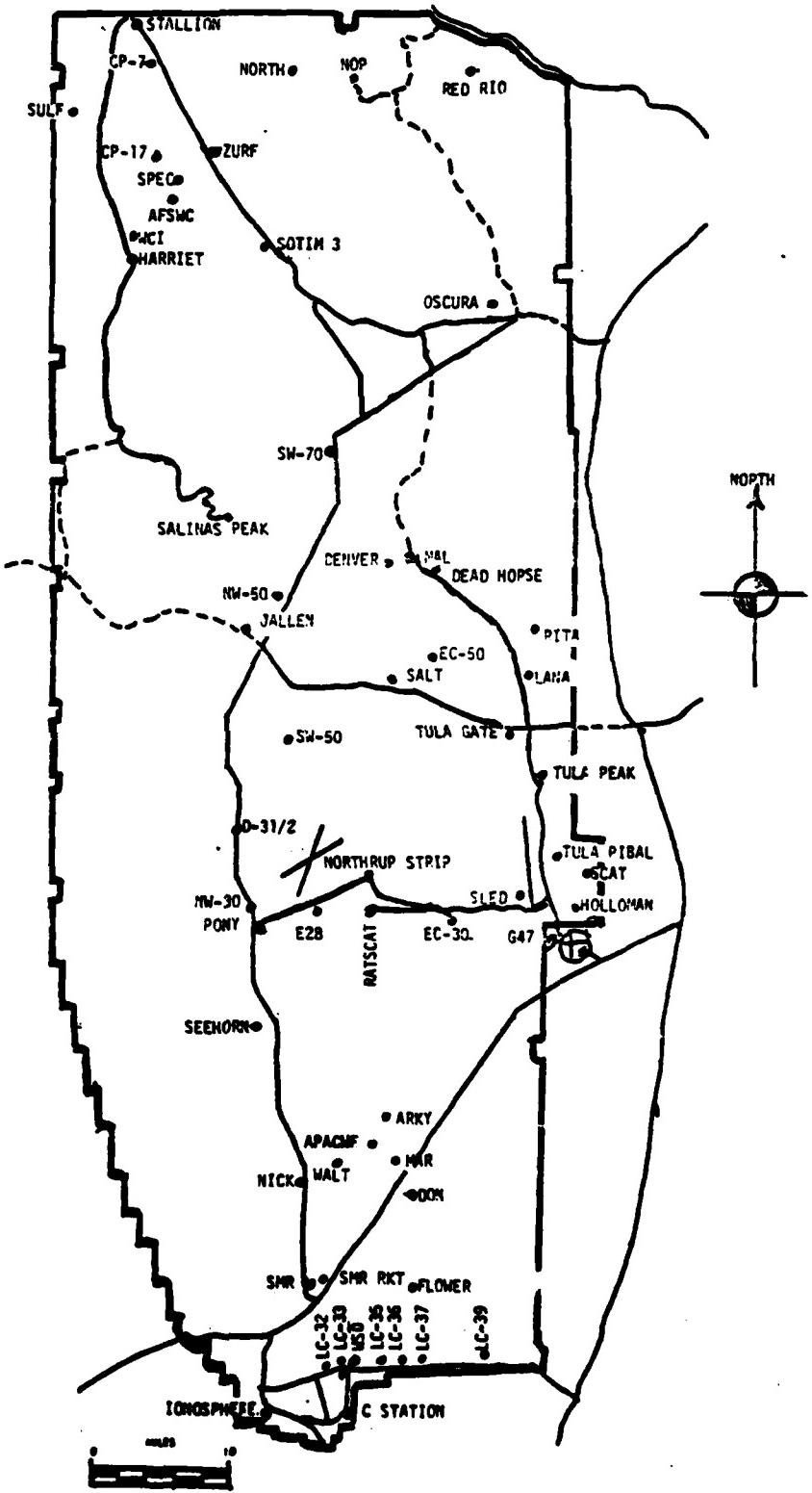
SITE AND TIME

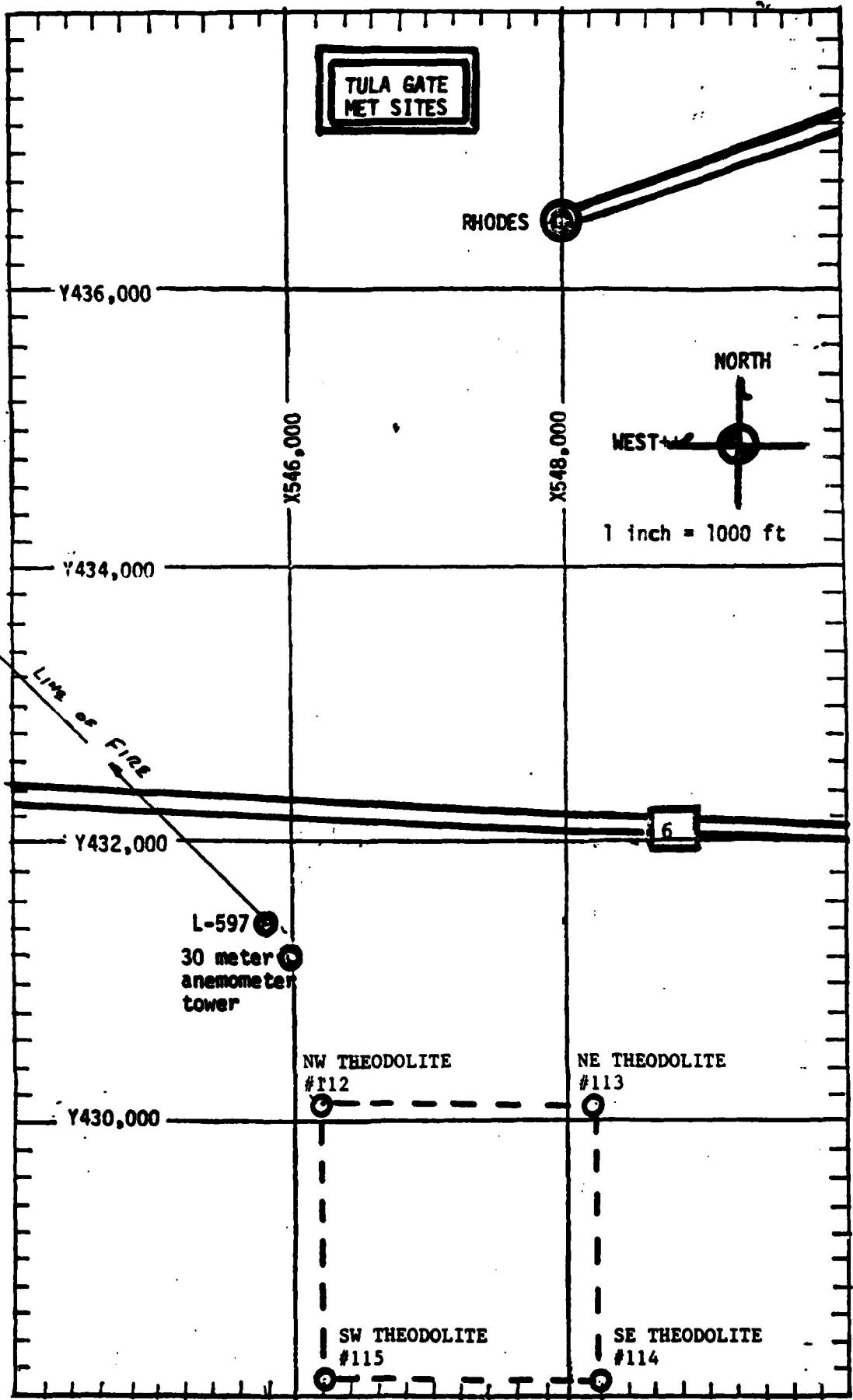
Rita	0815 MST
Lana	0915 MST
Lana	1036 MST
Rita	1036 MST



A-1

WSMR METEOROLOGICAL SITES





PROFESS SURFACE OBSERVATION

TABLE 1

DATE H M S	MONTH 07	YEAR 84	PRESSURE mbs	TEMPERATURE °C	DEN. POINT °C	RELATIVE HUMIDITY %	DESI g/m ³	DIRECTION deg. Tn	MIND kts	CHARACTER kts	VISIBIL- ITY
1038	882.3			9.8	-6.6	31			260	2.0	-
											40

OBSTRUCTIONS TO VISIBILITY	CLOUDS			REMARKS		
	1st LAYER ANT	2nd LAYER TYPE	3rd LAYER HGT	AIR	17°C	16°C
CLEAR						

PSYCHROMETRIC COMPUTATION

TIME: MST	1038		
DRY BULB TEMP.	9.8		
WET BULB TEMP.	3.0		
WET BULB DEPR.	6.8		
DEW POINT	-6.6		
RELATIVE HUMID.	31		

TABLE 2

ANEMOMETER DATA - 30 Ft Level of 30 Meter Tower
X= 545,944.89 Y= 431,158.70 H= 4102.47 (BASE)

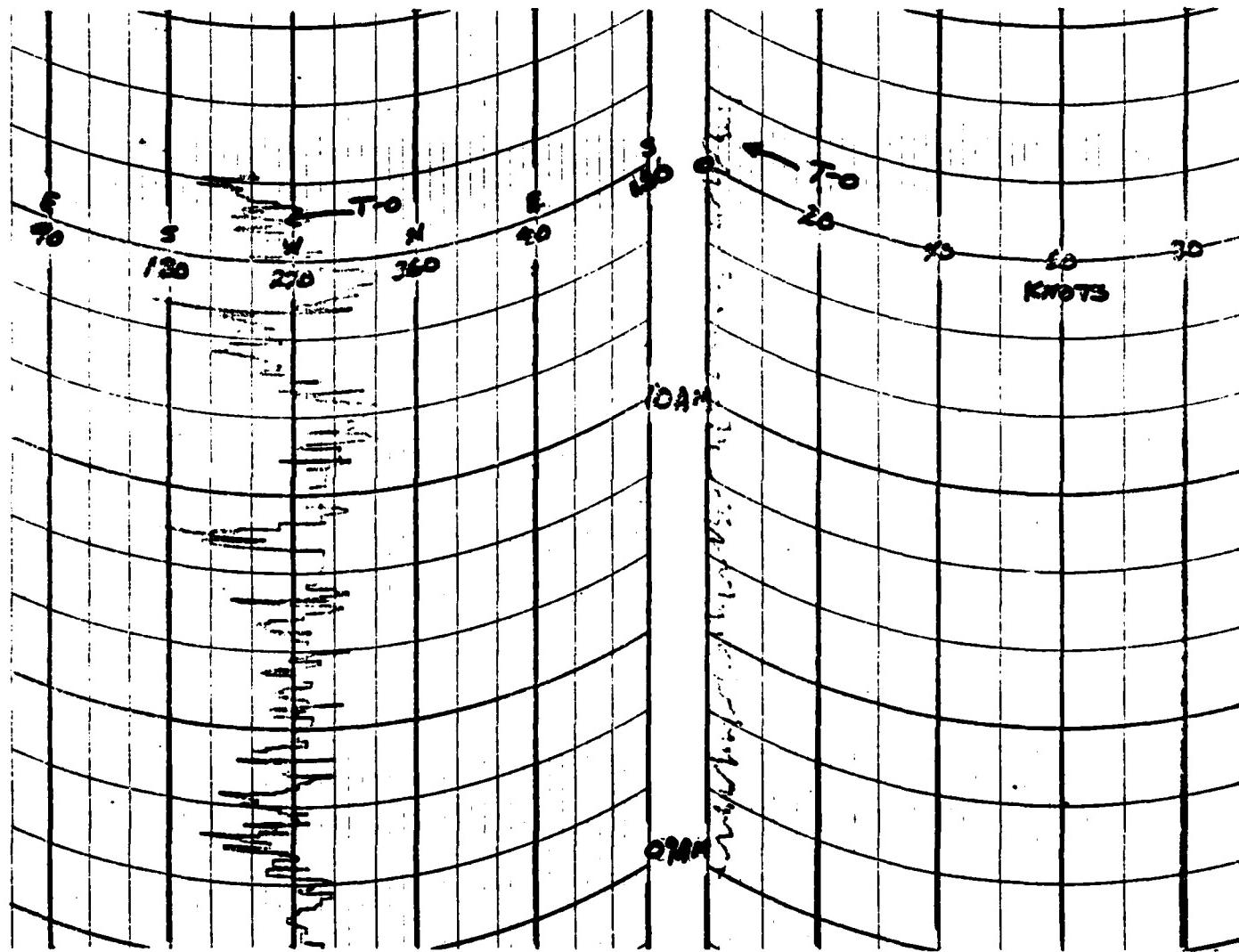


TABLE 3

ANEMOMETER DATA - 60 Ft Level of 30 Meter Tower

X= 545,944.89 Y= 431,158.70 H= 4102.47 (BASE)

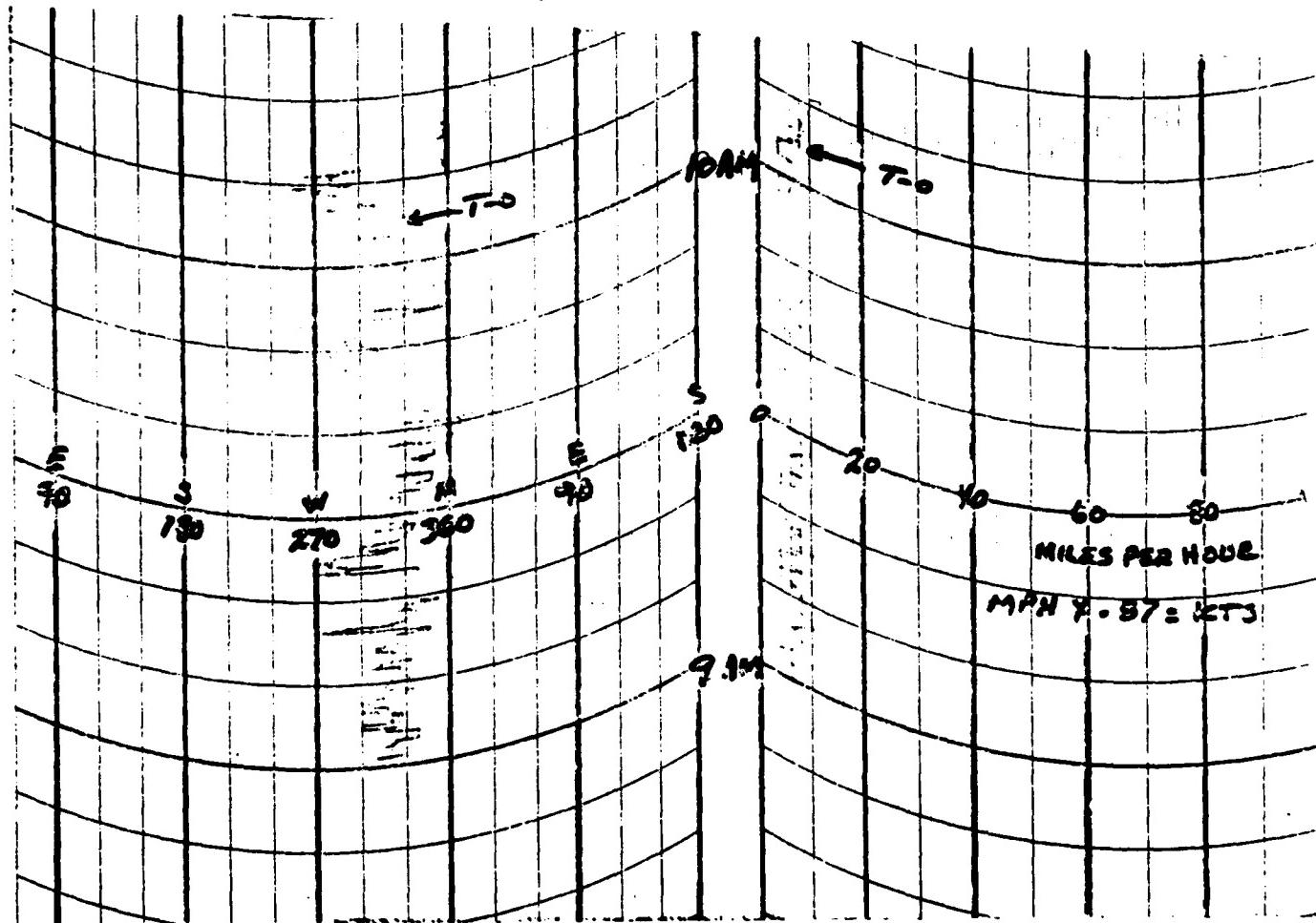


TABLE 4

ANEMOMETER DATA - 90 Ft Level of 30 Meter Tower
X= 545,944.89 Y= 431,158.70 H= 4102.47 (BASE)

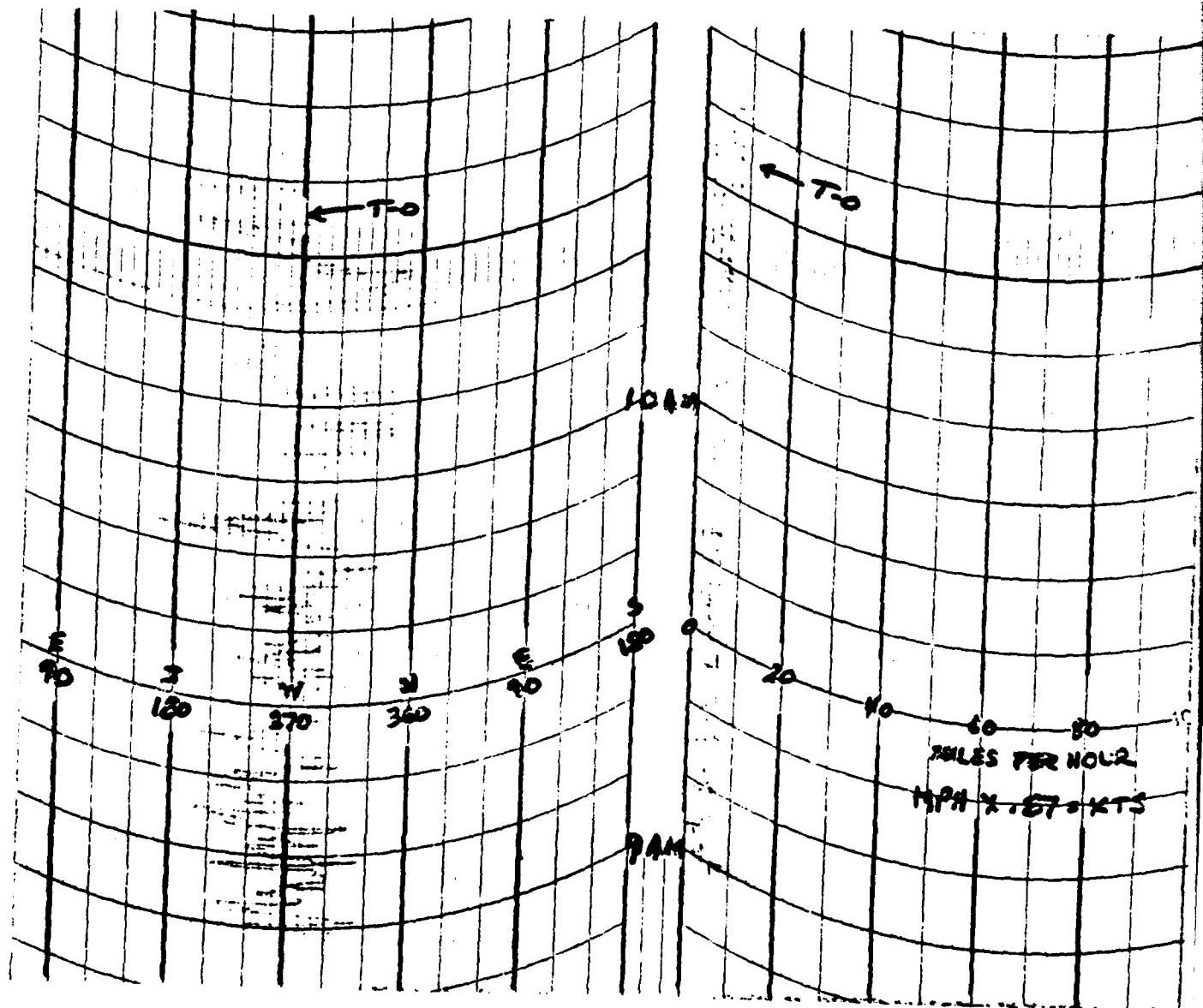


TABLE 5

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 07 March 1984

SITE: TULA GATE
 TIME: 1035 MST
 WSTM COORDINATES:
 X= 546,204.20
 Y= 430,125.39
 H= 4,108.59

SITE: MAL
 TIME 1036 MST
 WSTM COORDINATES:
 X=509,421.05
 Y=479,563.78
 H= 4,133.09

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS	LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	260	02	SURFACE	270	04
150	240	03	150	269	03
210	256	03	210	268	03
270	284	03	270	267	03
330	284	03	330	266	02
390	280	04	390	269	02
500	285	05	500	275	03
650	299	04	650	281	04
800	318	03	800	279	05
950	008	02	950	278	07
1150	347	03	1150	282	08
1350	331	08	1350	282	10
1550			1550	277	12
1750			1750	277	14
2000			2000	282	16

Data obtained from a Single
 Theodolite tracked pilot-balloon
 observation.

Data obtained from a Double
 Theodolite tracked pilot-balloon
 observation.

TABLE 6

AIMING AND T-TIME COMPUTER MET MESSAGES

07 March 1984

Rita 0815 MST
 METCM1332062
 071530128880
 00000000 27390880
 01610002 27700869
 02275003 27670843
 03430002 27520802
 04548005 27100754
 05543020 27330708
 06570023 27170665
 07571025 26800624
 08563026 26420585
 09570028 26030549
 10581027 25610514
 11568031 25230480
 12560040 34730434

Lana 0915 MST
 METCM1331062
 071630127879
 00000000 28100879
 01553003 27920869
 02226001 27710842
 03462002 27470802
 04545007 27140753
 05546018 27430707
 06580019 27180665
 07588020 26780624
 08563024 26400585
 09565027 26010548
 10575029 25620513
 11567032 25250480
 12548045 24820433

Lana 1036 MST
 METCM1331062
 071760127879
 00427003 28460879
 01509004 28240868
 02520004 27970842
 03547002 27590802
 04594008 27400754
 05518014 27550708
 06553011 27240666
 07559015 26870625
 08542019 26490586
 09548024 26120550
 10553029 25750515
 11543031 25340481
 12532044 23800435

Rita 1036 MST
 METCM1332062
 071760128879
 00427002 28180879
 01294004 28150868
 02482005 27890842
 03537004 27530802
 04592006 27390753
 05519014 27540708
 06535010 27230665
 07558013 26850625
 08543018 26460586
 09547022 26080549
 10555027 25700514
 11545029 25280481
 12530039 24700434

STATION ALTITUDE 4186.74 FEET PSL
7 MAR. 46 0815 'HRS PST
ASCENSION NO. 9

SIGNIFICANT LEVEL DATA
0670210000
WITA
TABLE 7

GEODETIC COORDINATES
33.18295 LAT DEG
106.15114 LON DEG

PRESSURE MILLIBAR	GEOPOTENTIAL PSL FFL	TEMPERATURE DEGREES FFL	AIR DEPOINT DEGREES CENTIGRADE	RFL. HGT. PERCENT
979.9	4196.7	.2	-8.7	51.0
977.9	4267.0	3.7	-5.7	50.0
950.0	5107.6	3.2	-9.7	73.0
911.8	6310.7	2.9	-11.8	33.0
769.6	779.0	-1.4	-13.5	19.0
744.0	8621.4	-3.2	-17.5	32.0
734.3	8962.4	-3.4	-20.1	26.0
721.1	9426.4	-1	-18.2	74.0
705.9	9996.5	-2	-18.3	74.0
700.0	10217.6	0.9	-16.9	25.0
688.0	11416.2	-1.4	-17.9	27.0
561.0	15842.0	-11.3	-25.7	24.0
400.0	18792.2	-18.9	-31.7	11.0
465.6	20525.7	-22.6	-34.4	13.0
454.1	21128.5	-23.4	-35.4	12.0
400.0	24120.0	-10.2	-21.2	13.0
59.1	26635.2	-36.1	-33.0	73.0
49.3	27267.0	-6.5	-6.8	73.0

STATION ALTITUDE 4186.74 FEET "SL
7 MAR '84 0815 HRS MST
ASCENSION NO. 9

UPPER AIR DATA
0670210000
PIRA
TABLE 8

GEOGRAPHIC COORDINATES
33.18295 LAT DEG
106.15116 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	Dewpoint DEGREES CELSIUS	HGT. HUM. PERCENT	WIND DATA	INDEX OF REFRACTION
				METER	KNOTS	
4186.7	879.9	-2	-8.7	51.0	1119.8 664.5	1.000266
4500.0	869.6	3.6	-6.8	46.5	1093.1 648.6	1.000262
5000.0	853.4	3.3	-9.2	19.5	1074.1 648.1	1.000254
5500.0	837.6	3.1	-10.4	16.4	1054.9 647.9	1.000249
6000.0	822.0	3.0	-11.2	14.4	1035.7 647.8	1.000244
6500.0	806.6	2.4	-11.9	13.7	1017.7 647.0	1.000249
7000.0	791.5	.9	-12.5	75.9	1005.1 645.2	1.000246
7500.0	776.6	-7	-13.2	78.0	991.8 643.4	1.000242
8000.0	761.9	-1.9	-14.7	16.9	977.7 641.9	1.000238
8500.0	747.5	-3.0	-16.9	73.0	962.9 640.6	1.000233
9000.0	733.2	-3.1	-19.9	75.8	945.4 640.4	1.000217
9500.0	719.4	-1	-18.2	24.0	917.1 646.0	1.000212
10000.0	705.8	-2	-18.3	24.0	901.1 643.9	1.000206
10500.0	692.5	-4	-17.1	26.3	881.1 644.6	1.000204
11000.0	679.5	-6	-17.6	867.7 643.4	1.000201	
11500.0	666.6	-1.6	-18.1	27.0	856.4 642.5	1.000198
12000.0	653.8	-2.7	-19.0	27.1	841.5 640.9	1.000195
12500.0	641.2	-3.8	-19.8	27.5	828.7 639.0	1.000191
13000.0	628.8	-4.9	-20.7	27.7	816.2 638.2	1.000188
13500.0	616.7	-6.1	-21.6	27.9	803.8 636.9	1.000185
14000.0	604.8	-7.2	-22.5	28.2	791.7 635.5	1.000182
14500.0	593.2	-8.3	-23.4	28.4	779.8 634.2	1.000179
15000.0	581.8	-9.4	-24.2	28.6	767.0 632.8	1.000176
15500.0	570.5	-10.5	-25.1	28.8	756.4 631.5	1.000173
16000.0	559.4	-11.7	-26.1	29.1	745.1 630.1	1.000170
16500.0	548.3	-13.0	-27.1	29.4	733.9 628.5	1.000167
17000.0	537.4	-14.3	-28.1	29.8	722.9 626.9	1.000164
17500.0	526.7	-15.6	-29.1	30.1	712.0 625.4	1.000162
18000.0	516.2	-16.9	-30.1	30.5	701.4 623.8	1.000159
18500.0	505.9	-18.1	-31.1	30.8	690.9 622.2	1.000157
19000.0	495.7	-19.3	-32.0	31.2	680.2 620.7	1.000154
19500.0	485.7	-20.4	-32.6	31.8	669.2 619.4	1.000151
20000.0	475.8	-21.5	-33.6	32.4	658.4 618.1	1.000149
20500.0	466.1	-22.5	-34.3	33.0	647.7 616.8	1.000146
21000.0	456.5	-23.2	-35.2	32.2	636.2 616.0	1.000144
21500.0	447.0	-24.2	-36.1	32.1	625.5 616.7	1.000141
22000.0	437.7	-25.4	-37.1	32.3	615.1 615.3	1.000139
22500.0	428.6	-26.5	-36.0	32.5	605.2 611.9	1.000136
23000.0	419.7	-27.6	-37.0	32.6	595.4 610.5	1.000134
23500.0	410.9	-28.8	-38.0	32.8	585.6 609.1	1.000132

STATION ALTITUDE 4186.74 FEET MSL
 7 MAR. 84 0815 HRS MST
 ASCENSION NO. 9

UPPER AIR DATA
 06702100000
 PITA
 TABLE 11 (CONT'D)

GEOGRAPHIC COORDINATES
 33.18295 LAT DEG
 106.15114 LONG DEG

GEOMETRIC PRESSURE ALTITUDE PSL FEET	TEMPERATURE AIR MILLIBARS	REL.HUM. PERCENT	SPEED OF SOUND METERS CENTIGRADE	WIND DATA DIRECTION DEGREES(1N) KNOTS	INDEX OF REFRACTION
24000.0	402.4	-79.9	33.0	312.7	45.6
24500.0	393.8	-71.1	33.0	313.2	47.6
25000.0	385.4	-72.2	33.0	314.0	49.7
25500.0	377.2	-73.4	33.0	315.1	51.8
26000.0	369.1	-74.6	33.0	316.2	53.9
26500.0	361.2	-75.8	33.0	317.1	56.0
27000.0	353.4	-76.3	33.0	318.2	58.1

STATION ALTITUDE 4156.74 FEET MSL
7 MAR. 84 0815 HRS PST
ASCENSION NO. 9

MANDATORY LEVELS
0602100000
RITA

GEOGRAPHIC COORDINATES
33.16295 LAT NEG
106.15114 LON DEG

TABLE 9

PRESSURE MILLIBARS	GEOPOTENTIAL FERT	TEMPERATURE		REL.HUM. PERCENT	WIND DATA	
		DEGREES	CENTIGRADE		DIRECTION DEGREES(CN)	SPEED KNOTS
850.0	5104.	3.2	-9.7	78.	194.8	1.0
800.0	6714.	1.7	-12.2	75.	241.3	2.2
750.0	8405.	-2.9	-16.5	34.	302.8	8.1
700.0	10208.	.9	-16.9	25.	309.4	20.5
650.0	12148.	-3.0	-19.2	27.	321.8	23.9
600.0	14209.	-7.6	-22.8	28.	316.4	25.3
550.0	16410.	-12.4	-26.9	29.	320.7	28.4
500.0	18767.	-18.9	-31.7	31.	324.6	27.2
450.0	21316.	-23.9	-35.8	32.	316.2	19.4
400.0	24102.	-30.2	-41.2	33.	312.9	4.6.0
350.0	27174.	-36.5	-46.8	33.		

STATION ALTITUDE 4173.44 FEET "SL
7 MAY. 84 0915 WNS MST
ASCENSION NO. 9

SIGNIFICANT LEVEL DATA
0470320000
LAMA
TABLE 10

GEOGRAPHIC COORDINATES
33.13510 LAT DEG
106.15446 LON DEG

PRESSURE (BAROMETRIC MILLIBARS)	GEOMETRIC ALTITUDE FEET	TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE	REF. NUM. PERCENT
779.2	6173.4	7.4	-3.7
771.0	6346.3	6.2	-10.5
750.0	5070.5	3.1	-10.8
736.1	5517.8	3.9	-11.7
727.7	5809.6	3.6	-15.6
720.0	5106.3	-2.8	-15.8
716.4	5575.2	-3.2	-22.9
731.9	908.1	.2	-21.3
722.1	9345.6	.2	-21.3
709.4	9861.0	1.5	-20.2
700.0	10193.8	1.4	-20.3
690.6	10590.9	.9	-20.7
690.7	14270.2	-8.0	-27.5
700.0	10769.4	-18.5	-4.0
677.8	19877.7	-21.2	-15.5
452.0	21220.7	-22.9	-16.3
400.0	24111.6	-29.1	-40.5
330.2	27418.7	-18.1	-48.8

STATION ALTITUDE 4177.64 FEET PSL
7 MAR. 84. 0915 HRS NST
ASCENSION NO. 9

UPPER AIR DATA
0470370000
LAMA

TABLE 11

GEODETIC COORDINATES
53°13'51" LAT DEG
106°15'46" LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DIMPOINT DEGREES	PERCENT	KELVIN	SOUND SPEED FT/SEC	DIRECTION DEGREES(TW)	SPEED KNOTS	WIND DATA INDEX OF REFRACTION
6173.4	879.2	7.4	-3.7	45.0	1080.5	653.2	0.0	0.0	1.000265
6500.0	868.6	5.6	-10.5	30.1	1084.2	650.8	162.1	.1	1.000255
5900.0	852.5	3.4	-10.6	34.3	1072.4	648.3	162.1	.4	1.000252
5500.0	846.7	3.9	-11.6	31.2	1051.0	649.8	162.1	.6	1.000247
6000.0	821.0	3.1	-15.5	24.1	1034.6	647.7	166.1	.7	1.000240
6500.0	805.6	1.7	-15.3	26.9	1020.1	646.1	199.7	.8	1.000237
7000.0	790.5	-1.3	-15.7	29.7	1006.2	644.5	256.4	1.4	1.000234
7500.0	775.6	-1.1	-15.5	32.6	997.3	642.8	281.4	3.1	1.000230
8000.0	761.0	-2.5	-15.7	25.4	978.7	641.2	201.4	6.6	1.000227
8500.0	746.6	-3.1	-21.5	22.6	962.7	640.3	107.9	10.5	1.000220
9000.0	732.4	-1	-21.3	15.1	937.3	644.1	209.5	13.8	1.000214
9500.0	718.6	-6	-21.0	18.0	914.1	644.7	308.1	16.3	1.000209
10000.0	705.1	1.5	-20.2	18.0	894.0	645.8	106.8	18.1	1.000205
10500.0	691.9	1.0	-7.0	6.6	878.8	645.2	312.7	18.5	1.000202
11000.0	678.8	-2	-71.5	18.1	865.7	643.9	318.7	18.6	1.000198
11500.0	665.8	-1.4	-72.4	18.3	852.9	642.4	325.5	18.3	1.000195
12000.0	653.1	-2.6	-23.3	18.4	840.4	641.0	129.7	18.6	1.000192
12500.0	640.7	-3.8	-74.2	18.5	828.0	639.6	332.2	19.1	1.000189
13000.0	628.4	-4.9	-75.1	18.7	815.0	638.2	330.7	20.0	1.000186
13500.0	616.4	-6.1	-76.1	16.8	803.9	636.7	327.5	20.9	1.000183
14000.0	604.7	-7.3	-77.0	16.9	792.1	635.3	322.4	21.9	1.000180
14500.0	593.0	-8.5	-27.8	19.2	780.3	633.9	118.7	23.4	1.000177
15000.0	581.2	-9.7	-78.5	19.8	768.3	632.0	215.4	21.0	1.000174
15500.0	569.8	-10.9	-29.2	20.4	756.4	631.1	315.7	26.0	1.000171
16000.0	558.5	-12.0	-79.9	20.9	744.8	629.6	316.7	26.9	1.000169
16500.0	547.4	-13.2	-10.6	21.5	733.4	628.2	316.0	27.3	1.000166
17000.0	536.6	-14.4	-31.3	22.0	722.1	626.8	119.4	27.7	1.000163
17500.0	526.0	-15.5	-72.1	22.6	711.1	625.4	120.5	28.2	1.000161
18000.0	515.6	-16.7	-32.8	23.1	700.2	624.0	21.0	28.5	1.000158
18500.0	505.4	-17.9	-13.6	23.7	689.5	622.5	324.9	28.8	1.000156
19000.0	495.3	-19.1	-74.3	24.4	678.0	621.1	325.1	28.9	1.000153
19500.0	485.3	-20.3	-15.0	25.3	668.3	619.6	321.1	30.9	1.000151
20000.0	475.4	-21.4	-15.6	26.2	657.6	618.3	116.6	34.2	1.000148
20500.0	465.7	-22.0	-75.9	26.9	645.7	617.5	712.6	38.6	1.000146
21000.0	456.1	-22.6	-76.2	27.7	634.1	616.7	706.9	40.9	1.000143
21500.0	446.7	-23.5	-74.3	28.4	627.9	621.1	707.0	41.9	1.000140
22000.0	437.4	-24.6	-76.7	29.1	617.9	614.3	706.9	42.3	1.000138
22500.0	428.4	-25.6	-76.1	30.8	607.9	613.0	704.6	44.2	1.000136
23000.0	419.5	-26.7	-78.8	31.1	597.8	611.7	708.2	47.8	1.000133
23500.0	410.7	-27.4	-9.6	31.1	581.0	610.3	51.6	51.6	1.000131

STATION ALTITUDE 4173.44 FEET MSL
7 MAR. 86 0915 HRS MST
ASCENSION NO. 9

UPPER AIR DATA
Lc 70370007
1AIA
TABLE 11 CONT'D

GEOGRAPHIC COORDINATES
33.13510 LAT DEG
106.15446 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	Dewpoint CENT.GRADE	RFL.HUM. PERCENT	DENSITY CM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(1M) KNOTS	INDEX OF REFRACTION
24000.0	402.2	-78.2	-40.3	11.8	571.4	609.0	111.7	55.0
24500.0	393.7	-70.6	-41.3	11.9	561.9	607.6	110.6	56.7
25000.0	385.2	-71.2	-42.4	11.8	554.5	606.1	109.9	61.8
25500.0	377.0	-32.3	-43.5	31.6	545.3	604.6	109.0	62.8
26000.0	368.9	-33.5	-44.6	11.5	536.2	603.1	109.4	63.3
26500.0	361.0	-74.7	-45.7	51.4	527.4	601.6	108.7	63.8
27000.0	353.3	-75.9	-46.8	11.2	518.6	600.1	107.8	64.6
27500.0	345.7	-77.1	-47.9	11.1	510.1	598.6		1.000114

STATION ALTITUDE 4173.4 FEET MSL
7 APR. 84 0915 HHS MS1
ASCENSION NO. 9

MULTIPLY LEVELS
0.70370000
1MM
TABLE 12

GEODETIC COORDINATES
33°15'51" LAT REG
106°15'46" LON REG

MILLIBARS PRESSURE GEOPOTENTIAL WHEELS	FEET OF GORES OF TIGRADE	TEMPERATURE AIR DEPOINT PERCENT	WIND DATA	
			DIRECTION DEGREES(IN)	SPEED KNOTS
85.0	5075.	3.1	-10.2	162.1
800.0	5625.	1.2	-15.3	200.4
750.0	8275.	-3.1	-6.5	0.9
700.0	10186.	1.4	-20.3	107.2
650.0	12127.	-2.9	-21.5	18.2
600.0	14187.	-7.8	-27.4	18.7
550.0	16286.	-12.0	-30.6	22.4
500.0	18746.	-18.5	-36.0	27.2
450.0	21297.	-23.1	-36.6	32.6
400.0	24097.	-29.1	-40.5	38.8
350.0	27179.	-36.4	-47.2	41.9
				55.8
				511.3
				311.3
				11.1

STATION ALTITUDE 4173.44 FEET PSL
 7 MAR. 84 1036 HWS MST
 ASCENSION NO. 10

SIGNIFICANT LEVEL DATA
 US70370110
 LANA
 TABLE 13

GEODETIC COORDINATES
 33°13'51" LAT DEG
 106°15'46" LONG DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE PSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT
970.9	4173.4	10.8	29.0
971.5	4412.0	2.7	-11.2
970.0	4076.7	6.9	-10.8
791.1	6993.9	1.2	-12.2
768.0	7775.3	*2	-20.1
752.2	9321.9	*3	-21.1
748.4	9171.8	3.1	-20.2
700.0	1227.2	1.8	-20.6
500.0	1878.3	-17.3	-14.3
473.2	20176.4	-21.0	-15.4
416.0	21267.1	-27.4	-76.6
400.0	24171.9	-29.6	-17.3
365.7	24933.9	-30.7	-19.1
337.7	29446.6	-38.8	-46.6

SATION ALTITUDE 4175.64 FEET MSL
7 MAR. 1954 HRS 151
ASCENSION NO. 10

UPPER AIR DATA
U.7M320010
LAWA
TABLE 14

GEODETIC COORDINATES
33°13'51" LAT DEG
106°15'44" LON DEG

GEOMETRIC ALTITUDE PSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	ATMOSPHERIC DROUGHT PERCENT	DENSITY CM/CUBIC METERS	WIND SPEED KNOTS	DIRECTION DEGREES (TN)	WIND DATA INDEX
4175.4	878.8	10.8	-6.5	.29.0	1076.4	657.0	240.0
4500.0	868.3	8.5	-11.2	.23.4	1072.7	654.2	247.4
5000.0	852.4	7.1	-10.8	.26.5	1052.3	652.6	262.7
5500.0	836.6	5.6	-11.0	.29.0	1044.2	650.9	262.5
6000.0	821.1	4.2	-11.3	.31.3	1030.1	649.1	103.1
6500.0	805.9	2.7	-11.7	.33.7	1018.6	647.4	120.5
7000.0	790.9	1.2	-12.2	.35.9	1003.2	645.6	132.7
7500.0	776.1	0.6	-16.9	.25.6	987.0	644.8	131.2
8000.0	761.5	-0.0	-20.5	.19.6	970.6	644.0	132.8
8500.0	747.1	.4	-20.9	.16.4	950.0	644.5	315.7
9000.0	733.1	2.4	-20.4	.16.6	926.1	646.9	01.7
9500.0	719.4	2.7	-20.3	.16.3	900.0	647.2	296.4
10000.0	706.0	2.1	-20.5	.16.8	891.1	646.5	294.4
10500.0	692.6	1.2	-14.0	.17.1	879.9	645.5	296.4
11000.0	679.2	.1	-21.8	.17.4	865.4	644.2	301.8
11500.0	666.0	-1.0	-22.5	.17.6	852.1	642.8	307.1
12000.0	653.1	-2.1	-21.5	.17.8	839.1	641.5	111.4
12500.0	640.4	-3.2	-24.1	.15.1	826.2	640.2	114.3
13000.0	628.0	-4.4	-24.9	.15.3	813.6	638.7	113.6
13500.0	615.9	-5.5	-25.7	.18.5	801.1	637.5	111.0
14000.0	603.9	-6.6	-26.4	.12.8	789.9	636.2	102.9
14500.0	592.2	-7.7	-27.2	.19.0	776.9	634.9	106.9
15000.0	580.8	-8.8	-28.0	.19.2	765.1	633.5	206.1
15500.0	569.5	-9.9	-28.8	.19.5	753.4	632.2	206.0
16000.0	558.5	-11.0	-29.7	.19.7	742.0	630.9	07.1
16500.0	547.7	-12.1	-30.5	.19.9	730.7	629.5	20R.4
17000.0	537.1	-13.2	-31.3	.20.1	710.6	628.2	10C.5
17500.0	526.7	-14.4	-32.1	.20.4	70P.7	626.8	710.6
18000.0	516.5	-15.5	-32.9	.20.6	690.0	625.5	10J.7
18500.0	506.5	-16.6	-33.8	.20.8	782.5	624.1	710.5
19000.0	496.5	-17.3	-34.4	.21.6	687.1	622.6	70R.7
19500.0	486.5	-19.1	-34.8	.23.5	667.0	621.0	706.4
20000.0	476.6	-20.5	-35.2	.25.3	657.1	619.3	10J.9
20500.0	466.9	-21.7	-35.4	.27.6	646.4	617.9	01.4
21000.0	457.2	-22.7	-35.4	.30.0	635.8	616.6	700.1
21500.0	447.8	-23.7	-35.6	.32.4	625.7	615.1	299.4
22000.0	438.6	-24.6	-35.6	.34.9	615.0	614.0	40.2
22500.0	429.5	-25.6	-36.1	.37.3	606.9	612.8	298.7
23000.0	420.7	-26.6	-36.7	.39.7	596.8	611.5	45.5
23500.0	411.9	-28.0	-42.5	.42.5	585.1	610.1	67.8

STATION ALTITUDE 4173.64 FEET RSL
 7 MAR. 84 103E HHS NSI
 ASCENSION NO. 10

UPPER AIR DATA
 0670320010
 LSL

TABLE 14, CONT'D

GEODETIC PRESSURE ALTITUDE RSL FEET	TEMPERATURE DEGREES MILLIBARS	WIND DIRECTION CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	WIND SPEED KNOTS	WIND DATA DEGREES(1N)	DIRECTION KNOTS	INFO FX OF REFRACTION
24000.0	403.3	-79.1	45.8	575.6	608.6	301.0	51.7	1.000110
24500.0	394.8	-70.0	45.4	565.5	607.5	302.2	53.0	1.000117
25000.0	386.4	-70.7	43.0	555.2	606.6	303.1	54.0	1.000115
25500.0	378.1	-71.4	43.0	545.9	605.1	303.7	54.7	1.000123
26000.0	370.0	-73.1	41.3	536.8	603.7	303.9	55.6	1.000121
26500.0	362.0	-76.3	42.4	527.8	602.2	303.8	56.7	1.000119
27000.0	354.2	-75.4	43.0	519.0	600.7	302.1	49.1	1.000116
27500.0	346.6	-76.6	44.6	510.4	599.2			1.000114
28000.0	339.1	-77.6	45.6	501.7	597.7			1.000112

STATION ALTITUDE 4173.44 FEET RSL
7 KAR. 84 1036 HRS MST
ASCENSION NO. 10

"ANNUALITY LEVELS
UN7037001"
LANA
TABLE 15

GEODETIC COORDINATES
33° 13' 10" LAT DEG
106° 15' 46" LON DEG

PRESSURE GEOPOTENTIAL MILLIBARS	FERTY	TEMPERATURE DEGREES CENTIGRADE	WIND DATA		
			AIR DEPOINT PERCENT	PERCENT DEGREES (IN)	DIRECTION OF PRESSURE) SPEED KNOTS
851.0	5173.	6.9	-10.8	27.	265.4 2.1
800.0	669.	2.1	-11.0	15.	325.9 2.6
750.0	897.	.0	-21.0	19.	319.3 7.7
700.0	1021P.	1.8	-20.6	17.	291.5 13.8
650.0	1216Z.	-2.4	-23.5	18.	312.9 11.9
600.0	1422Z.	-7.0	-26.7	19.	307.7 18.4
550.0	16434.	-11.9	-30.7	20.	308.1 24.2
500.0	18003.	-17.5	-34.7	21.	309.6 29.5
450.0	21161.	-23.5	-35.5	32.	299.6 40.1
400.0	24151.	-29.6	-37.7	47.	301.5 52.1
350.0	27241.	-36.1	-44.1	43.	300.6 43.9

STATION ALTITUDE 4196.74 FEET PSL
7 MAR. 84 1036 HRS MST
ASCENSION NO. 10

SIGNIFICANT LEVEL DATA
0670210010
PITA
TABLE 16

GEODETIC COORDINATES
33.18795 LAT DEG
106.15114 LON DEG

PRESSURE	ALTIMETRIC	TEMPERATURE	RFL. HUM.
PILLIAMS	PSL STFT	AIR DEGREES CENTIGRADE	PERCENT
878.8	6196.7	8.3	41.0
877.8	4217.7	8.0	-3.9
850.0	507.6	6.0	-9.3
800.9	7046.5	.7	-11.6
780.1	7349.4	.2	-17.9
754.7	8254.2	.0	-22.1
723.0	9374.2	2.7	17.0
700.0	10231.4	1.8	-21.3
600.0	18324.2	-17.8	16.0
465.7	27556.5	-22.5	-21.0
424.8	22755.9	-27.2	-16.9
412.1	27472.6	-29.1	-17.7
404.7	27897.8	-30.2	-17.2
400.0	24171.1	-30.7	-18.1
395.3	24447.2	-30.9	-18.9
394.7	27338.7	-37.1	-65.2

STATION ALTITUDE 4160.74 FEET 51
7 MAR. 94 1036 HRS MST
ASCENSION NO. 10

WEATHER ATW DATA
JAN 2021 UNTIL
PIRA
TABLE 17

GEOMETRIC COORDINATES
31.16295 LAT DEG
106.15114 LON REG

GEOMETRIC ALTITUDE PSL FEET	PRESSURE MILLIBARS	TEMPERATURE 10 ³ DEGREES CELSIUS	DROPPOINT DEGREES CELSIUS	HUMIDITY PERCENT	DENSITY GM/CUBIC MILE	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(10) WIND(SPEED) KNOTS	INDEX OF REFRACTION
4186.7	878.0	9.3	-6.2	41.0	1085.6	654.2	10.0	46.6
4500.0	852.7	8.0	-5.6	17.1	1074.7	653.7	8.0	39.1
5000.0	852.8	6.7	-9.2	11.9	1061.7	651.7	5.0	27.1
5500.0	826.9	4.9	-10.1	14.7	1047.1	650.0	15.4	1.000247
6000.0	821.4	3.5	-10.6	14.7	1032.9	648.4	14.0	1.000244
6500.0	806.1	2.2	-11.1	16.8	1019.7	646.8	10.0	1.000240
7000.0	791.1	0.6	-11.6	18.8	1004.8	645.2	14.5	2.7
7500.0	776.2	-2	-18.5	15.0	989.7	644.1	140.2	3.5
8000.0	761.6	-1	-20.8	15.0	970.6	644.1	130.6	4.6
8500.0	747.3	-6	-21.9	16.6	950.5	644.7	111.5	7.7
9000.0	733.3	1.4	-21.5	15.7	929.6	646.2	103.0	10.5
9500.0	719.6	2.6	-21.3	15.1	909.6	647.1	296.8	12.5
10000.0	706.1	2.0	-21.3	15.7	891.4	646.5	293.5	13.1
10500.0	692.7	1.4	-21.7	16.2	879.1	645.0	291.0	12.6
11000.0	679.2	-0	-22.4	16.4	865.7	644.1	296.1	11.1
11500.0	666.1	-1.1	-23.2	16.7	852.5	642.7	203.7	10.1
12000.0	653.2	-2.2	-23.9	17.0	839.5	641.4	110.6	9.8
12500.0	640.5	-3.4	-24.7	17.3	826.7	640.0	113.7	10.5
13000.0	628.1	-4.5	-25.4	17.6	814.1	638.7	124.8	12.2
13500.0	615.9	-5.7	-26.2	17.9	801.8	637.3	111.2	14.4
14000.0	604.0	-6.8	-27.0	18.2	789.6	635.9	208.4	16.6
14500.0	592.3	-7.9	-27.7	18.5	777.6	634.6	106.7	18.2
15000.0	580.8	-9.1	-28.5	18.8	765.9	633.2	104.6	19.0
15500.0	569.5	-10.2	-29.3	19.1	754.3	631.8	104.9	19.3
16000.0	558.5	-11.4	-30.1	19.4	742.9	630.4	105.9	20.0
16500.0	547.6	-12.5	-30.9	19.6	731.7	629.1	107.0	21.7
17000.0	537.0	-13.6	-31.7	19.9	720.7	627.7	110.0	24.2
17500.0	526.6	-14.8	-32.5	20.2	709.8	626.3	111.6	26.2
18000.0	516.4	-15.9	-33.4	20.5	699.2	624.9	312.4	26.6
18500.0	506.4	-17.1	-34.2	20.8	688.7	623.5	111.6	26.8
19000.0	496.4	-18.3	-34.8	21.7	679.1	622.0	310.1	27.4
19500.0	486.3	-19.6	-35.1	21.7	668.1	620.4	208.1	28.8
20000.0	476.5	-21.0	-35.4	25.8	659.1	616.7	205.4	30.3
20500.0	466.8	-22.3	-35.9	27.8	649.7	617.0	102.4	32.1
21000.0	457.1	-23.4	-36.0	20.2	637.6	615.7	300.2	34.1
21500.0	447.7	-24.5	-36.2	22.7	627.1	614.4	299.0	36.4
22000.0	438.4	-25.0	-36.4	25.2	616.8	613.0	298.4	38.3
22500.0	429.4	-26.7	-36.7	27.7	606.7	611.7	298.0	39.8
23000.0	420.4	-27.4	-37.1	40.4	596.9	610.2	297.6	40.7
23500.0	411.6	-29.2	-43.5	-7.6	587.6	608.6	298.7	42.5

STATION ALTITUDE 4136.74 FEET MSL
 7 MAR. 84 1036 HRS MST
 ASCENSION NO. 10

UPPER AIR DATA
 0470210010
 RIA
 TABLE 17 CONT'D

GEODETIC COORDINATES
 33°18'29" LAT DEG
 106°15'11" LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL.HUM. PERCENT	SPEED OF SOUND METER KNOTS	DIRECTION DEGREES (TN)	WIND DATA INDEX OF REFRACTION
24000.0	402.9	-70.4	-77.5	44.3	570.1	007.1	44.6
24500.0	394.6	-71.0	-79.0	44.9	567.3	006.3	45.7
25000.0	385.9	-72.1	-80.1	44.4	557.6	004.9	46.8
25500.0	377.7	-73.2	-81.2	43.9	546.1	03.2	46.9
26000.0	369.5	-74.2	-82.3	43.4	538.8	02.2	47.5
26500.0	361.6	-75.3	-83.4	42.9	529.6	00.9	47.5
27000.0	353.9	-76.4	-84.5	42.4	520.6	99.5	47.5

STATION ALTITUDE 4186.74 FFLY #SL
7 MAR. 84 1030 HRS PST
ASCENSION NO. 10

MANDATORY LEVELS
0-7021001
TABLE 18

GEOGRAPHIC COORDINATES
33.18295 LAT DEG
106.15114 LON DEG

PRESSURE (EQUIVALENT)	TEMPERATURE	REL. HUM.	WIND DATA
MILLIBARS	DEGREES C (NTGHD)	PERCENT	DIRECTION DEGREES (TN) SPEED KNOTS
PSn.0	5084.0	6.0	-9.8 31. 5.0 25.1
80n.0	6707.0	1.5	-11.3 38. 318.9 3.0
75n.0	6198.0	.4	-22.0 17. 313.9 7.0
70n.0	10722.0	1.8	-21.7 16. 292.4 13.0
65n.0	12166.0	-2.5	-24.1 17. 311.6 10.0
60n.0	14231.0	-7.2	-27.2 18. 107.3 17.7
55n.0	16436.0	-12.2	-30.7 20. 107.7 21.5
50n.0	18790.0	-17.9	-34.7 21. 110.9 26.9
45n.0	21151.0	-24.1	-36.1 32. 299.2 35.8
40n.0	24137.0	-30.7	-38.1 48. 301.5 44.8
35n.0	27207.0	-36.9	-45.1 42.